

GUVI ASSIGNMENT

Create a database worker that should contain **first name, last name email, department, salary, Join Date** with 50 employees.

The screenshot shows the MySQL Workbench interface with a query results grid. The schema is set to 'employee'. The query executed is:

```
1 • Select * from worker
```

The results grid displays 50 rows of employee data:

emp_no	first_name	last_name	email	department	salary	join_date
1	James	Smith	JamesSmith@gmail.com	Geoinformatics	45000	2019-10-03
2	Christopher	Anderson	ChristopherAnderson@gmail.com	Geoinformatics	25000	2019-11-07
3	Ronald	Clark	RonaldClark@gmail.com	ECE	27000	2019-12-12
4	Kamal	raja	Kamalraja@guvi.com	Automobile	35000	2019-12-25
5	Ramesh		Ramesh@gmail.com	Geoinformatics	40000	2020-01-05
6	Michelle	Johnson	MichelleJohnson@gmail.com	Geoinformatics	70000	2020-03-03
7	John	Thomas	JohnThomas@gmail.com	Structural	55000	2020-05-16
8	Daniel	Rodriguez	DanielRodriguez@gmail.com	Petroleum	57000	2020-07-01
9	Anthony	Lopez	AnthonyLopez@gmail.com	Structural	78000	2020-08-20
10	Robert	Lewis	RobertLewis@gmail.com	Geoinformatics	85000	2020-03-10
11	Santhosh	Narayan	SanthoshNarayan@gmail.com	Structural	81700	2021-03-25
12	David	Miller	DavidMiller@gmail.com	Metallurgical	100000	2021-04-12
13	Chris	Evans	ChrisEvans@gmail.com	Petroleum	120000	2021-03-29
14	Owen	Wilson	OwenWilson@gmail.com	MCA	64000	2021-06-08
15	Margaret	Edwards	MargaretEdwards@gmail.com	MCA	72000	2022-09-26
16	John	Doe	JohnDoe@gmail.com	ECE	45000	2018-10-01
17	Mary	Smith	MarySmith@yahoo.com	Thermal	55000	2018-10-08
18	William	Jones	WilliamJones@gmail.com	Automobile	65000	2018-10-15
19	Emily	Davis	EmilyDavis@gmail.com	Geoinformatics	75000	2018-10-22
20	Robert	Brown	RobertBrown@yahoo.com	ECE	60000	2019-09-29
21	Sarah	Wilson	SarahWilson@gmail.com	Thermal	65000	2019-11-05
22	Thomas	Lee	ThomasLee@yahoo.com	Geoinformatics	105000	2018-11-12
23	Olivia	Green	OliviaGreen@gmail.com	Automobile	115000	2018-11-19

1. Write an SQL query to fetch “**FIRST_NAME**” from the Worker table using the alias name as <WORKER_NAME>

ANS : Select first_name as worker_name from worker;

The screenshot shows the MySQL Workbench interface with a query results grid. The schema is set to 'employee'. The query executed is:

```
1 • Select first_name as worker_name from worker
```

The results grid displays 50 rows of employee data, with the column header 'first_name' renamed to 'worker_name':

worker_name
James
Christopher
Ronald
Kamal
Ramesh
Michelle
John
Daniel
Anthony
Robert
Santhosh
David
Chris
Owen
Margaret
John
Mary
William
Emily
Robert
Sarah
Thomas
Olivia

2. Write an SQL query to fetch unique values of DEPARTMENT from the Worker table.

ANS : Select DISTINCT department from worker;

The screenshot shows the MySQL Workbench interface. In the Navigator pane, under the 'employee' schema, the 'Tables' section is expanded, and the 'worker' table is selected. In the central Query Grid, the following SQL query is run:

```
1 • Select DISTINCT department
2   from worker;
3
```

The Result Grid displays the unique department names:

department
Geoinformatics
ECE
Automobile
Thermal
Structural
Petroleum
MBA
MCA

The status bar at the bottom indicates 'Query Completed'.

3. Write an SQL query to show the last 5 records from a table.

ANS : (Select * from worker order by emp_no DESC limit 5) order by emp_no ASC;

The screenshot shows the MySQL Workbench interface. In the Navigator pane, under the 'employee' schema, the 'Tables' section is expanded, and the 'worker' table is selected. In the central Query Grid, the following SQL query is run:

```
1 • (Select * from worker
2   order by emp_no
3   DESC limit 5)
4   order by emp_no ASC;
5
```

The Result Grid displays the last 5 records from the worker table, ordered by emp_no in descending order:

emp_no	first_name	last_name	email	department	Salary	join_date
46	Lucas	Coleman	LucasColeman@gmail.com	ECE	23700	2023-04-16
47	Scarlett	Marshall	ScarlettMarshall@gmail.com	Automobile	248000	2023-04-23
48	William	Simpson	WilliamSimpson@gmail.com	Thermal	259000	2023-04-30
49	Victoria	Fox	VictoriaFox@gmail.com	Geoinformatics	270000	2023-05-07
50	Ethan	Burke	EthanBurke@gmail.com	ECE	281000	2023-05-14

The status bar at the bottom indicates 'Query Completed'.

TASK-2

1. Write an SQL query to print the first three characters of FIRST_NAME from Worker.

ANS : Select substring(first_name,1,3) from worker;

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 • Select substring(first_name,1,3)
2 From worker;
3
```

The result grid displays the output of the query, which consists of a single column labeled "substring(first_name,1,3)" containing the first three characters of each first name from the worker table. The results are:

substring(first_name,1,3)
Jam
Chr
Ron
Kam
Ram
Mic
Joh
Dan
Ant
Rob
San
Dav
Chr
Owe
Mar
Joh
Mar
Wil
Eri
Rob
Sar
Tho
Oll

2. Write an SQL query to find the position of the alphabet ('a') in the first name.

ANS : Select first_name, position('a' IN first_name) from workers

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 • Select first_name, position('a' IN first_name)
2 From workers;
3
```

The result grid displays the output of the query, which consists of two columns: "first_name" and "position('a' IN first_name)". The results are:

first_name	position('a' IN first_name)
James	2
Christopher	0
Ronald	4
Kamal	2
Ramesh	2
Michelle	0
John	0
Daniel	2
Anthony	1
Robert	0
Santhosh	2
David	2
Chris	0
Owen	0
Margaret	2
John	0
Mary	2
William	6
Emily	0
Robert	0
Sarah	2
Thomas	5

3. Write an SQL query to print the name of employees who have the highest salary in each department.

ANS : SELECT emp_no, department, MAX(salary) FROM worker GROUP BY department

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'Navigator' with the 'Schemas' section expanded, showing the 'employee' schema with its tables, views, stored procedures, and functions. The main area contains a 'Query 1' tab with the following SQL code:

```
1 • SELECT emp_no, department, MAX(salary)
2   FROM worker
3   GROUP BY department;
```

The results are displayed in a 'Result Grid' table:

emp_no	department	MAX(salary)
1	Geoinformatics	270000
3	ECE	281000
4	Automobile	248000
5	Thermal	259000
7	Structural	81700
8	Petroleum	120000
12	MBA	137000
14	MCA	73000

The status bar at the bottom indicates 'Object Info' and 'Session' with a search bar, and shows system information like battery level, signal strength, and date/time (28-03-2023, 11:50).

TASK-3

1. Write an SQL query to print the FIRST_NAME from the Worker table after removing white spaces from the right side.

ANS : Select RTRIM(first_name) from worker

MySQL Workbench

Local instance

File Edit View Query Database Server Tools Scripting Help

Navigator: SCHEMAS employee

Query 1:

```
1 • Select RTRIM(first_name)
2   From worker;
```

Result Grid:

RTRIM(first_name)
James
Christopher
Ronald
Kamal
Ramesh
Michelle
John
Daniel
Anthony
Robert
Santhosh
David
Chris
Owen
Margaret
John
Mary
William
Emily
Robert
Sarah
Thomas
Olivia

Object Info Session Output

Query Completed

Type here to search

11:50 28-03-2023

2. Write an SQL query that fetches the unique values of DEPARTMENT from the Worker table and prints its length

ANS : Select DISTINCT department, LENGTH(department) from worker

MySQL Workbench

Local instance

File Edit View Query Database Server Tools Scripting Help

Navigator: SCHEMAS employee

Query 1:

```
1 • Select DISTINCT department, LENGTH(department)
2   From worker;
```

Result Grid:

department	LENGTH(department)
Geoinformatics	14
ECE	3
Automobile	10
Thermal	7
Structural	10
Petroleum	9
MBA	3
MCA	3

Object Info Session Output

Query Completed

Type here to search

11:51 28-03-2023

3. Write an SQL query to fetch nth max salaries from a table.

ANS : SELECT Salary FROM employee ORDER BY Salary DESC LIMIT 5-1,1;

The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane displays the 'employee' schema with its tables, views, stored procedures, and functions. The top-right pane, titled 'SQLAdditions', contains a message about context help being disabled. The central area features a 'Query 1' window with the following SQL code:

```
1 • SELECT Salary FROM worker
2   ORDER BY Salary DESC
3   LIMIT 4,1;
```

Below the code, the 'Result Grid' shows a single row of data:

Salary
226000

The bottom status bar shows the session information: 'Object Info Session', 'Query Completed', and the system status: 'Type here to search' and '11:23 21-04-2023'.

TASK-4

1. Write an SQL query to print the FIRST_NAME from the Worker table after replacing 'a' with 'A'.

ANS : Select REPLACE(first_name,'a','A') from worker;

The screenshot shows the MySQL Workbench interface. In the Navigator pane, under the 'employee' schema, the 'Tables' section is expanded, showing the 'worker' table. A query window titled 'Query 1' contains the SQL command:

```
1 • Select REPLACE(first_name,'a','A') from worker;
```

The results grid displays the modified first names:

REPLACE(first_name,'a','A')
James
Christopher
Ronald
KAMAL
RAmesh
Michelle
John
Daniel
Anthony
Robert
SAnthon
David
Chris
Owen
MArgaret
John
Mary
WILLAm
Emily
Robert
SAAh
ThomAs
Olivia

The status bar at the bottom right shows the date and time: 28-03-2023 11:54.

2. Write an SQL query to print all Worker details from the Worker table order FIRST_NAME Ascending and DEPARTMENT Descending.

ANS : Select * from worker order by first_name asc, department desc

The screenshot shows the MySQL Workbench interface. In the Navigator pane, under the 'employee' schema, the 'Tables' section is expanded, showing the 'worker' table. A query window titled 'Query 1' contains the SQL command:

```
1 Select * from worker order by first_name asc, department desc;
```

The results grid displays the worker details:

emp_no	first_name	last_name	email	department	Salary	join_date
30	Alexander	King	AlexanderKing@yahoo.com	Geoinformatics	185000	2019-01-07
9	Anthony	Lopez	AnthonyLopez@gmail.com	Structural	78000	2020-08-20
45	Aria	Fisher	AriaFisher@gmail.com	Geoinformatics	226000	2023-04-09
32	Ava	Carter	AvaCarter@gmail.com	Thermal	83000	2023-01-08
43	Avery	Barnes	AveryBarnes@gmail.com	Automobile	204000	2023-03-26
35	Berjamin	Phillips	BerjaminPhillips@gmail.com	Automobile	116000	2023-01-29
34	Charlotte	Bell	CharlotteBell@gmail.com	ECE	105000	2023-01-22
13	Chris	Evans	ChrisEvans@gmail.com	Petroleum	120000	2021-02-28
2	Christopher	Anderson	ChristopherAnderson@gmail.com	Geoinformatics	250000	2019-11-07
8	Daniel	Rodriguez	DanielRodriguez@gmail.com	Petroleum	57000	2020-07-01
12	David	Miller	DavidMiller@gmail.com	MBA	137000	2021-01-12
26	David	Hall	DavidHall@yahoo.com	Geoinformatics	145000	2018-12-10
19	Emily	Davis	EmilyDavis@gmail.com	Geoinformatics	75000	2018-10-22
29	Emma	Allen	EmmaAllen@gmail.com	Thermal	175000	2018-12-31
50	Ethan	Burke	EthanBurke@gmail.com	ECE	281000	2023-05-14
39	Evelyn	Cooper	EvelynCooper@gmail.com	Automobile	160000	2023-02-26
27	Isabella	Young	IsabellaYoung@gmail.com	Automobile	155000	2018-12-17
44	Jackson	Gonzalez	JacksonGonzalez@gmail.com	Thermal	215000	2023-04-02
31	Jacob	Turner	JacobTurner@gmail.com	Automobile	72000	2023-01-01
40	James	Richardson	JamesRichardson@gmail.com	Thermal	171000	2023-03-09
1	James	Smith	JamesSmith@gmail.com	Geoinformatics	45000	2019-10-03
28	James	Robinson	JamesRobinson@yahoo.com	ECE	165000	2018-12-24
7	John	Thomas	JohnThomas@gmail.com	Structural	53000	2020-05-16

The status bar at the bottom right shows the date and time: 28-03-2023 11:54.

3. Write an SQL query to fetch the names of workers who earn the highest salary

ANS : Select first_name, max(Salary) from worker

The screenshot shows the MySQL Workbench interface. In the top-left corner, the title bar says "MySQL Workbench Local instance". The main area has a toolbar with various icons. Below the toolbar is a "Navigator" pane showing the "employee" schema with tables like "worker", "Columns", "Indexes", "Foreign Keys", and "Triggers". A "Query 1" tab is open, displaying the following SQL code:

```
1 Select first_name, salary from worker
2 where
3 salary = (select max(salary) from worker);
```

Below the code is a "Result Grid" showing the output:

first_name	salary
Ethan	20100

The status bar at the bottom right shows "11:54 28-03-2023".

TASK-5

1. Write an SQL query to print details of workers excluding first names, "Ramesh" and "Santhosh" from the Worker table.

ANS : Select * from worker where first_name NOT IN ('Ramesh', 'Santhosh')

The screenshot shows the MySQL Workbench interface with a query results grid. The query executed is:

```

1 • Select * from worker
2   where first_name NOT IN ('Ramesh', 'Santhosh')

```

The result grid displays the following data:

emp_no	first_name	last_name	email	department	Salary	join_date
1	James	Smith	JamesSmith@gmail.com	Geoinformatics	45000	2019-10-03
2	Christopher	Anderson	ChristopherAnderson@gmail.com	Geoinformatics	25000	2019-11-07
3	Ronald	Clark	RonaldClark@gmail.com	ECE	27000	2019-12-12
4	Kamal	raja	Kamalraja@gmail.com	Automobile	35000	2019-12-25
5	Michelle	Johnson	MichelleJohnson@gmail.com	Geoinformatics	70000	2020-03-03
7	John	Thomas	JohnThomas@gmail.com	Structural	55000	2020-05-16
8	Daniel	Rodriguez	DanielRodriguez@gmail.com	Petroleum	57000	2020-07-01
9	Anthony	Lopez	AnthonyLopez@gmail.com	Structural	78000	2020-08-20
10	Robert	Lewis	RobertLewis@gmail.com	Geoinformatics	85000	2020-03-10
12	David	Miller	DavidMiller@gmail.com	MBA	137000	2021-01-12
13	Chris	Evans	ChrisEvans@gmail.com	Petroleum	120000	2021-02-28
14	Owen	Wilson	OwenWilson@gmail.com	MCA	64000	2021-06-08
15	Margaret	Edwards	MargaretEdwards@gmail.com	MCA	73000	2022-08-26
16	John	Doe	JohnDoe@gmail.com	ECE	45000	2018-10-01
17	Mary	Smith	MarySmith@yahoo.com	Thermal	55000	2018-10-08
18	William	Jones	WilliamJones@gmail.com	Automobile	65000	2018-10-15
19	Emily	Davis	EmilyDavis@gmail.com	Geoinformatics	70000	2018-10-22
20	Robert	Brown	RobertBrown@yahoo.com	ECE	80000	2018-10-29
21	Sarah	Wilson	SarahWilson@gmail.com	Thermal	95000	2018-11-05
22	Thomas	Lee	ThomasLee@yahoo.com	Geoinformatics	105000	2018-11-12
23	Olivia	Green	OliviaGreen@gmail.com	Automobile	115000	2018-11-19
24	Michael	Taylor	MichaelTaylor@yahoo.com	ECE	125000	2018-11-26
25	Sophia	Adams	SophiaAdams@gmail.com	Thermal	135000	2018-12-03

2. Write an SQL query to print details of the Workers whose FIRST_NAME ends with 'h' and contains six alphabets.

ANS : SELECT * FROM worker WHERE first_name LIKE '_____h'

The screenshot shows the MySQL Workbench interface with a query results grid. The query executed is:

```

1 • SELECT * FROM worker WHERE first_name LIKE '_____h';
2

```

The result grid displays the following data:

emp_no	first_name	last_name	email	department	Salary	join_date
5	Ramesh	Kumar	RameshKumar@gmail.com	Thermal	60000	2020-01-20

3. Write a query to validate Email of Employee (email should have first name last name and guvi.com example (first name=Kamal last name= raja and the mail id should be kamalraja@guvi.com).

ANS : Select first_name, email from worker where email like '%guvi.com';

The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane displays the 'employee' schema with its tables, including 'worker'. A query window titled 'Query 1' contains the following SQL code:

```
1 • Select first_name, email from worker
2   where email like '%guvi.com';
```

The results grid shows one row of data:

first_name	email
Kamal	Kamalraja@guvi.com

The status bar at the bottom right indicates the session is 'Read Only' and shows the date and time as 28-03-2023 11:56.

TASK-6

1. Write an SQL query to print details of the Workers who have joined in March '2021.

ANS : Select * from worker where year(join_date) = 2021 and month(join_date) = 3;

MySQL Workbench

Local instance

File Edit View Query Database Server Tools Scripting Help

Navigator: SCHEMAS

employee

Tables

worker

Columns

Indexes

Foreign Keys

Triggers

Views

Stored Procedures

Functions

sys

Query 1

```
1 • Select * from worker
2   where year(join_date) = 2021 and month(join_date) = 3;
3
```

Result Grid | Filter Rows | Edit | Export/Import | Wrap Cell Contents |

emp_no	first_name	last_name	email	department	Salary	join_date
11	Santhosh	Narayan	Santhosh.Narayan@gmail.com	Structural	81700	2021-03-25
MAX	MAX	MAX	MAX	MAX	MAX	MAX

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Administration Schemas

Information

Schema: employee

Object Info Session

Output

Type here to search

12:00 28-03-2023

2. Write an SQL query to fetch duplicates that have matching data in some fields of a table.

ANS : Select department, first_name, COUNT(*) FROM worker GROUP BY department, first_name HAVING count(*) > 1

MySQL Workbench

Local instance

File Edit View Query Database Server Tools Scripting Help

Navigator: SCHEMAS

employee

Tables

worker

Columns

Indexes

Foreign Keys

Triggers

Views

Stored Procedures

Functions

sys

Query 24

```
1 • Select department, first_name, COUNT(*)
2   FROM worker
3   GROUP BY department, first_name
4   HAVING count(*) > 1;
5
6
7
```

Result Grid | Filter Rows | Export | Wrap Cell Contents |

department	first_name	COUNT(*)
ECE	Robert	2

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Administration Schemas

Information

Column: first_name

Collation: utf8mb4_0900_ai_ci

Definition: first_name varchar(14)

Object Info Session

Output

Type here to search

12:16 28-03-2023

3.How to remove duplicate rows from the Employees table.

ANS : Here you can see the query is executed below in action output.

The screenshot shows the MySQL Workbench interface. In the top navigation bar, 'Local instance' is selected. The 'Query 1' tab is active, displaying the following SQL code:

```
1 delete from worker
2 where emp_no in (select * from
3 select max(emp_no) from worker group by first_name having count(*)>1) as t;
```

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
29	12:15:48	DELETE FROM worker WHERE last_name = 'Peterson'	1 row(s) affected	0.047 sec
30	12:15:53	INSERT INTO worker(first_name, last_name, email, department, salary, join_date) VALUES ('Robert', 'Peterson', 'rpeterson0@sample.com', 'Sales', 12000, '2006-05-17')	1 row(s) affected	0.141 sec
31	12:15:58	Select department, first_name, COUNT(*) FROM worker GROUP BY department, first_name HAVING count(*) > 1	1 row(s) returned	0.000 sec / 0.000 sec
32	12:16:48	Select department, first_name, COUNT(*) FROM worker GROUP BY department, first_name HAVING count(*) > 1	1 row(s) returned	0.000 sec / 0.000 sec
33	12:19:15	delete from worker where emp_no in (select * from (select max(emp_no) from worker group by first_name havin...)	7 row(s) affected	0.156 sec

TASK-7

1.Write an SQL query to show only odd rows from a table.

ANS : Select * from worker where mod(emp_no,2)<>0;

MySQL Workbench - Local instance

Query 1

```

1 • delete from worker
2   where emp_no in ( select * from
3     [select max(emp_no) from worker group by first_name having count(*)>1] as t);
  
```

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Information

Column: **first_name**
Definition: **first_name** varchar(14)

Action Output

#	Time	Action	Message	Duration / Fetch
29	12:15:48	DELETE FROM worker WHERE last_name = 'Peterson'	1 row(s) affected	0.047 sec
30	12:15:53	INSERT INTO worker(first_name, last_name, email, department, Salary, join_date) VALUES ('Robert', 'Peterson', 'rpeterson0@...')	1 row(s) affected	0.141 sec
31	12:15:58	Select department, first_name, COUNT(*) FROM worker GROUP BY department, first_name HAVING count(*) > 1	1 row(s) returned	0.000 sec / 0.000 sec
32	12:16:48	Select department, first_name, COUNT(*) FROM worker GROUP BY department, first_name HAVING count(*) > 1	1 row(s) returned	0.000 sec / 0.000 sec
33	12:19:15	delete from worker where emp_no in (select * from (select max(emp_no) from worker group by first_name havin...	7 row(s) affected	0.156 sec

Object Info Session Query Completed

Type here to search 12:20 28-03-2023

2. Write an SQL query to clone a new table from another table.

ANS : Create table worker_2 like worker; insert into worker_2 select * from worker;

MySQL Workbench - Local instance

Query 1

```

1 • Create table worker_2
2   like worker;
3 • insert into worker_2
4   select * from worker;
  
```

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Information

Column: **first_name**
Definition: **first_name** varchar(14)

Action Output

#	Time	Action	Message	Duration / Fetch
31	12:15:58	Select department, first_name, COUNT(*) FROM worker GROUP BY department, first_name HAVING count(*) > 1	1 row(s) returned	0.000 sec / 0.000 sec
32	12:16:48	Select department, first_name, COUNT(*) FROM worker GROUP BY department, first_name HAVING count(*) > 1	1 row(s) returned	0.000 sec / 0.000 sec
33	12:19:15	delete from worker where emp_no in (select * from (select max(emp_no) from worker group by first_name havin...	7 row(s) affected	0.156 sec
34	12:21:46	Select * from worker where mod(emp_no,2)=0 LIMIT 0, 1000	24 row(s) returned	0.016 sec / 0.000 sec
35	12:22:30	Create table worker_2 like worker	0 row(s) affected	0.703 sec
36	12:22:31	insert into worker_2 select * from worker	43 row(s) affected Records: 43 Duplicates: 0 Warnings: 0	0.063 sec

Object Info Session Query Completed

Type here to search 12:23 28-03-2023

The screenshot shows the MySQL Workbench interface. In the top navigation bar, 'Local instance' is selected. The 'Navigator' pane on the left shows the 'SCHEMAS' section with 'employee' expanded, revealing 'Tables', 'Columns', 'Indexes', 'Foreign Keys', and 'Triggers'. Below this, 'VIEWS', 'Stored Procedures', and 'Functions' are listed. The 'Information' section at the bottom shows 'No object selected'. The main area contains a 'Query 1' window with the following SQL query:

```
1 * Select * from worker_2;
```

The result grid displays 25 rows of data from the 'worker_2' table. The columns are: emp_no, first_name, last_name, email, department, salary, and join_date. The data includes various names like James Smith, Christopher Anderson, and many others, along with their respective details such as department (Geoinformatics, ECE, Thermal, Structural, etc.) and salary ranges (e.g., 45000 to 135000). A sidebar on the right provides options for 'Result Grid', 'Form Editor', 'Field Types', 'Query Stats', and 'Selection Plan'. The status bar at the bottom right shows the date and time as 28-03-2023 12:24.

TASK-8

1. Write an SQL query to fetch intersecting records of two tables.

ANS : Select emp_no, first_name, last_name from worker left join city on worker.emp_no = city.id

INTERSECT

Select emp_no, first_name, last_name from worker right join city on worker.emp_no = city.id

The screenshot shows the MySQL Workbench interface with a query editor containing the following SQL code:

```

1 Select emp_no, first_name, last_name
2   from worker
3   left join city
4     on worker.emp_no = city.id
5   INTERSECT
6 Select emp_no, first_name, last_name
7   from worker
8   right join city
9     on worker.emp_no = city.id

```

The results grid displays three rows of data:

emp_no	first_name	last_name
3	Ronald	Clark
5	Ramesh	Kumar
8	Daniel	Rodriguez

2. Write an SQL query to show records from one table that another table does not have.

ANS : SELECT * FROM worker2 WHERE first_name NOT IN (SELECT first_name FROM worker);

The screenshot shows the MySQL Workbench interface with a query editor containing the following SQL code:

```

1 SELECT * FROM worker_2
2 WHERE first_name NOT IN
3 (SELECT first_name
4   FROM worker);

```

The results grid displays two rows of data from the worker_2 table:

emp_no	first_name	last_name	email	department	Salary	join_date
51	Steve	Smith	JamesSmith@gmail.com	Geoinformatics	45000	2019-10-03
52	Jimmy	Anderson	ChristopheAnderson@gmail.com	Geoinformatics	25000	2019-11-07

TASK-9

1. Write an SQL query to show the top n (say 15) records of a table.

ANS : SELECT first_name,last_name, Salary FROM Worker ORDER BY Salary DESC LIMIT 14;

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'Navigator' with the 'Schemas' section expanded, showing the 'employee' schema with its tables: city, worker, and worker_2. The 'Tables' section under 'employee' lists city, worker, and worker_2. The 'worker' table is selected. The main area contains a 'Query 1' window with the following SQL query:

```
1 • SELECT first_name, last_name, Salary FROM Worker ORDER BY Salary DESC LIMIT 14;
```

The results are displayed in a 'Result Grid' table:

first_name	last_name	Salary
Ethan	Burke	281000
Victoria	Fox	270000
Scarlett	Marshall	248000
Lucas	Coleman	237000
Aria	Fisher	226000
Avery	Barnes	204000
Alexander	King	185000
Emma	Allen	175000
James	Robinson	165000
Evelyn	Cooper	160000
Isabella	Young	155000
William	Baley	149000
Ma	Kelly	138000
David	Miller	137000

The status bar at the bottom right shows the date and time: 28-03-2023 12:37.

2. Write an SQL query to determine the nth (say n=10) highest salary from a table.

ANS : SELECT first_name,last_name, Salary FROM Worker ORDER BY Salary DESC LIMIT 5,1;

```

MySQL Workbench
File Edit View Query Database Server Tools Scripting Help
Navigator: Schemas
Schemas
employee
Tables
city
worker
Columns
Indexes
Foreign Keys
Triggers
worker_2
Views
Stored Procedures
Functions
sys

Administration Schemas
Information
No object selected

Query 1 x
1 • SELECT first_name, last_name, Salary
2   FROM worker
3   ORDER BY Salary DESC
4   LIMIT 5,1

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch Rows: |
first_name last_name Salary
Avery Barnes 204000

Worker 30 x
Object Info Session
Output
Read Only Context Help Snippets
Query Completed
Type here to search
12:36 28-03-2023

```

TASK-10

1. Write an SQL query to determine the 8th highest salary without using TOP or LIMIT methods.

ANS : `SELECT first_name, Salary FROM (SELECT first_name, Salary, RANK() OVER (ORDER BY Salary DESC) as salary_rank FROM worker) ranked_salaries WHERE salary_rank = 1`

```

MySQL Workbench
File Edit View Query Database Server Tools Scripting Help
Navigator: Schemas
Schemas
employee
Tables
city
worker
Columns
Indexes
Foreign Keys
Triggers
worker_2
Views
Stored Procedures
Functions
sys

Administration Schemas
Information
Column: first_name
Collection: utf8mb4_0900_ai_ci
Definition: first_name varchar(14)

Query 1 x
1 • SELECT first_name, Salary FROM (SELECT first_name, Salary, RANK() OVER (ORDER BY Salary DESC) as salary_rank
2   FROM worker
3   ) ranked_salaries
4   WHERE salary_rank = 1

Result 6 x
Result Grid | Filter Rows: | Export: | Wrap Cell Content: |
first_name Salary
Ethan 281000

Object Info Session
Output
Read Only Context Help Snippets
Query Completed
Type here to search
11:28 21-04-2023

```

2. Write an SQL query to fetch the list of employees with the same salary.

ANS : Select distinct W.emp_no, W.FIRST_NAME, W.Salary from Worker W, Worker W1 where W.Salary = W1.Salary and W.emp_no != W1.emp_no;

The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane displays the schema structure under the 'employee' table, including tables, columns, indexes, foreign keys, triggers, and views. The main area contains a 'Query 1' tab with the following SQL code:

```
1 • Select distinct W.emp_no, W.FIRST_NAME, W.Salary from Worker W, Worker W1
2 where W.Salary = W1.Salary
3 and W.emp_no != W1.emp_no;
```

The 'Result Grid' tab shows the output of the query, displaying employee data with columns: emp_no, FIRST_NAME, and Salary. The results are:

emp_no	FIRST_NAME	Salary
17	Mary	55000
20	Robert	85000
7	John	55000
10	Robert	85000
34	Charlotte	105000
22	Thomas	105000

The 'Result 33' tab indicates that there were 33 rows in total. The status bar at the bottom right shows the date and time as 20-03-2023 12:38.

